

## SYSTEM AND METHOD FOR MONITORING PASSENGER OXYGEN SATURATION LEVELS AND ESTIMATING OXYGEN USAGE REQUIREMENTS

### ABSTRACT OF THE DISCLOSURE

A noninvasive system for monitoring the oxygen saturation level of a person subjected to reduced atmospheric pressure for avoiding hypoxemia. The system monitors a person's oxygen saturation level, comparing the saturation level to a predetermined level. When the measured saturation level is less than the predetermined level, the person is then supplied with an oxygen mixture for increasing the subject's oxygen saturation level to a safe level. The person's exposed reduced atmospheric pressure is also compared with a predetermined range of pressure levels. If this predetermined range of pressure levels is exceeded or maintained for a predetermined time duration, the person is then supplied with an oxygen mixture. Additionally, a device is provided for performing oxygen flight planning calculations for estimating oxygen usage for a predetermined flight plan that is based on the above system.